

**PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA**

Item # 12 (Rev. 1)

ENERGY DIVISION

Agenda ID #20580

RESOLUTION E-5213

June 2, 2022

**R E S O L U T I O N**

Resolution E-5213. Confirmation of candidates for appointment to the Diablo Canyon Independent Safety Committee (DCISC) for a three-year term beginning July 1, 2022.

PROPOSED OUTCOME:

- The California Public Utilities Commission (CPUC) ratifies the President's selection of candidates for consideration by the California Attorney General for appointment to the DCISC.

SAFETY CONSIDERATIONS:

- The DCISC reviews operations at Pacific Gas and Electric Company's (PG&E) Diablo Canyon Power Plant (DCPP) for the purpose of assessing the safety of current operations and suggesting recommendations for continued safe operations. The appointed candidate will serve a three-year term on the DCISC.

ESTIMATED COST:

- All ongoing DCISC costs were funded previously. Ratification of the CPUC President's selection of candidates for appointment to the DCISC will not result in any additional costs.

As required by D.21-09-003, dated September 10, 2021.

**SUMMARY**

The Diablo Canyon Independent Safety Committee (DCISC) consists of three members, each appointed in turn by the California Governor, the California Attorney General,

and the Chair of the California Energy Commission (CEC), serving staggered three-year terms. Section 1.B of the second restated charter for the DCISC describes the process for appointment of DCISC members: it requires the CPUC to select and forward to the appointing authority no more than three new candidates plus the incumbent for DCISC membership. The appointing authority for the current cycle is the California Attorney General. This Resolution ratifies the California Public Utilities Commission (CPUC or Commission) President's selection of Dr. Robert J. Budnitz as a candidate for reappointment, and Dr. Najmedin Meshkati and Dr. Michael D. Quinn as candidates for appointment to the DCISC, for a three-year term commencing on July 1, 2022.

## **BACKGROUND**

### **Establishment of the DCISC and Member Selection Process:**

The CPUC created the DCISC in Decision (D.)88-12-083 as part of the overall settlement of ratemaking issues for the DCP, which is owned and operated by Pacific Gas and Electric Company (PG&E). The DCISC is an independent, three-member committee responsible for monitoring the safety of PG&E's operation of DCP. The DCISC's budget is paid out of PG&E's revenues and charged to PG&E's ratepayers.<sup>1</sup> D.88-12-083 established the qualifications and procedures for appointment of members to the DCISC and defined the scope of the Committee's operations and responsibilities.<sup>2</sup> Membership on the DCISC is a compensated position.<sup>3</sup> On October 24, 2006, the DCISC submitted Application (A.) 06-10-024 proposing a restated charter. The CPUC adopted the restated charter in D.07-01-028 on January 25, 2007.

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<sup>1</sup> D.88-12-083, Appendix C, Paragraph 16.

<sup>2</sup> D.88-12-083, Appendix C, Attachment A.

<sup>3</sup> In Resolution E-3152, the Commission established that DCISC member compensation be set at levels commensurate with fees paid by PG&E for comparable services.

The compensation levels set in E-3152 have since been revised, most recently on May 8, 2020 in PG&E Advice Letter (AL) 5797-E-A. The current compensation levels are as follows: annual retainer of \$10,400; \$260/hour fee for attendance at DCISC meetings; \$260/hour fee for DCISC work performed outside of committee meetings in excess of 40 hours/year; and reimbursement of expenses incurred in performance of DCISC work. PG&E AL 6144-E requesting the same DCISC compensation levels was approved in April 2021.

Submission of a second restated charter was authorized in Ordering Paragraph 3 of D.21-09-003 on September 9, 2021, and approved in Advice Letter 6361-E on December 9, 2021.<sup>4</sup>

Section 1.B of the second restated charter describes the process for appointment of DCISC members. It requires the CPUC to select no more than three candidates for DCISC membership from among those applicants responding to an open request by the CPUC for applications. The incumbent member whose term is about to expire is to be deemed an additional candidate if he or she consents. The CPUC is charged with the responsibility to provide for public comment on the applicants' qualifications and potential conflicts of interest. The President of the CPUC is to review the applicants' qualifications, experience, and background, including any conflicts of interest,<sup>5</sup> together with any public comments, and propose as candidates to the appointing authority only persons with knowledge, background, and experience in the field of nuclear power plants and nuclear safety issues. The Energy Division prepares a draft resolution ratifying the President's selection of candidates for the Commission.

### **Current Applicants:**

On December 16, 2021, an open request for applications to fill the July 1, 2022, vacancy on the DCISC was posted on the CPUC's website.<sup>6</sup>

Applications were timely received from Dr. Najmedin Meshkati and Dr. Michael Quinn. In addition, Dr. Robert Budnitz, the incumbent member of the DCISC whose term is set to expire, sent a letter to the Energy Division confirming his willingness to continue serving as a member of the DCISC.

Dr. Budnitz provided a synopsis of his technical experience and professional activities relating to nuclear reactor and radioactive waste safety, including his experience as a researcher and consultant both independently and with various federal entities. Dr. Budnitz was originally appointed to the DCISC on October 10, 2007 by then

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<sup>4</sup> The Non-Standard Disposition Letter approving Advice Letter 6361-E and the text of the Second Restatement of the Charter for the Diablo Canyon Independent Safety Committee (in Attachment 2) are available at: [https://www.pge.com/tariffs/assets/pdf/adviceletter/ELEC\\_6361-E.pdf](https://www.pge.com/tariffs/assets/pdf/adviceletter/ELEC_6361-E.pdf).

<sup>5</sup> As conflicts of interest are a legal question, their review was conducted by the CPUC's legal department which the President then approved.

<sup>6</sup> A link to the announcement posted on the CPUC's website was sent to the service list of A.18-12-008 to ensure that parties interested in issues relating to the DCCP were aware of the announcement. A.18-12-008 was PG&E's 2018 Nuclear Decommissioning Cost Triennial Proceeding.

Attorney General Edmund “Jerry” G. Brown, Jr. Dr. Budnitz’s fifth term is set to expire on June 30, 2022.<sup>7</sup>

Dr. Meshkati’s application details his experience teaching and conducting research on the safety, risk reduction, and reliability enhancement of nuclear power plants while a Professor at the University of Southern California, in addition to serving on professional boards and as an adviser to the U.S. State Department.

In Dr. Quinn’s application, he describes his experience working in the nuclear power industry, and consulting on nuclear operations and safety for industry clients as well as the U.S. and Canadian governments. Dr. Quinn was previously selected by the Commission as one of the qualified candidates considered for appointment in 2014, 2015, 2017, 2018, 2019, 2020, and 2021.<sup>8</sup>

### **Public Comments on Applicants:**

On February 24, 2022, an announcement was posted on the CPUC’s website inviting comments on the candidates.<sup>9</sup> Summaries of their qualifications were included with the announcement. The full text of the public comments is included in Appendix B of this Resolution.

Comments in support of Dr. Budnitz’s reappointment were submitted by Dr. Peter Lam, current member of the DCISC. Dr. Lam supports Dr. Budnitz’s nomination due to his decade-plus tenure on the DCISC, his expertise in seismic reactor safety, and his service on domestic and international committees on seismic issues.

Comments in support of Dr. Meshkati’s appointment were submitted by Earl Carnes ~~and~~, Bill Hoyle and Amber Mace. Mr. Carnes, a former Senior Advisor at the Department of Energy, recommends Dr. Meshkati for the DCISC based not only on his technical and professional qualifications, but on his expertise in the field of risk

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<sup>7</sup> See CPUC Resolution E-4109 (September 6, 2007), CPUC Resolution E-4307 (February 25, 2010), CPUC Resolution E-4588 (June 27, 2013), CPUC Resolution E-4785 (June 23, 2016), and CPUC Resolution E-5001 (June 13, 2019).

<sup>8</sup> See CPUC Resolution E-4657 (June 12, 2014), CPUC Resolution E-4711 (February 26, 2015), CPUC Resolution E-4849 (June 16, 2017), CPUC Resolution E-4936 (May 31, 2018), CPUC Resolution E-5001 (June 13, 2019), CPUC Resolution E-5081 (June 11, 2020), and CPUC Resolution E-5145 (May 20, 2021).

<sup>9</sup> A link to the announcement was also sent to the service list in A.18-12-008. See footnote 6 above.

reduction in complex technological systems and his specific work on this topic for nuclear power systems. Mr. Hoyle, a former manager and investigator for the U.S. Chemical Safety Board, supports Dr. Meshkati's appointment based on twenty years of work together on safety investigations for the U.S. Chemical Board and his expertise in organizational and safety operations at nuclear power plants. [Ms. Mace, CEO of the California Council on Science and Technology, supports Dr. Meshkati based on his scientific knowledge and expertise, integrity, and professionalism, as well as her organization's extensive work with him on risk and safety issues.](#)

Comments in support of Dr. Quinn's appointment were submitted by Rochelle Becker and Matthew Sunseri. Ms. Becker, Executive Director for the Alliance for Nuclear Responsibility, supports the nomination of Dr. Quinn based on his acknowledgment that the "human performance aspects of nuclear power operations" will be critical for the DCISC as the power plant approaches closure, the fresh eyes he will bring to DCPD oversight, and his technical background. Mr. Sunseri, a nuclear industry professional, recommends Dr. Quinn based on his nuclear power plant experience, his consulting experience in event and organization analysis, and his service as a board member and chairman of a community board.

## **NOTICE**

Notice of this Resolution was made by publication in the CPUC's Daily Calendar. A copy of the Draft Resolution was sent to all of the applicants and to those submitting comments on their behalf. A copy of the Draft Resolution was also sent to the Attorney General and to the service list in PG&E's 2021 Nuclear Decommissioning Cost Triennial proceeding (A.21-12-007).

## **DISCUSSION**

**The second restated charter adopted in D.21-09-003 and Advice Letter 6361-E requires that candidates for appointment to the DCISC be persons with knowledge,**

**background, and experience in the field of nuclear power facilities and nuclear safety issues who demonstrate they have no conflicts of interest.<sup>10</sup>**

Summaries of the qualifications of each applicant are included in Appendix A of this Resolution.

**Dr. Robert J. Budnitz is qualified to continue to serve on the Diablo Canyon Independent Safety Committee.**

Dr. Budnitz is an incumbent member of the DCISC, having been appointed to his initial three-year term from July 2007 through June 2010 by then-Attorney General, Jerry Brown, who reappointed Dr. Budnitz for a second term from July 2010 through June 2013. Dr. Budnitz applied for reappointment to the DCISC in 2013. Even though the Attorney General did not make an appointment in 2013 to fill the vacancy on the Committee, Dr. Budnitz, in accordance with DCISC and CPUC rules, continued to serve on the Committee. He was reappointed to a fourth term by then-Attorney General Kamala Harris in June 2016, and to a fifth term by then-Attorney General Xavier Becerra in June 2019. In addition to serving on the DCISC, Dr. Budnitz still works as a consultant, advising on reactor safety both domestically and internationally. Previously, Dr. Budnitz worked on the scientific staff at Lawrence Berkeley National Laboratory (LBNL) where he researched the seismic safety of nuclear reactors. Prior to his time at LBNL, Dr. Budnitz spent more than 20 years as president of Future Resources Associates, Inc., a private consulting company he founded which specialized in reactor safety, radioactive waste, and related subjects. This was followed by employment with Lawrence Livermore National Laboratory, which included two years with the Department of Energy's Office of Civilian Radioactive Waste Management. Dr. Budnitz began his career at LBNL in 1967, where he eventually rose to the positions of Associate Director and Head of the Energy and Environment Division, followed by two years as a senior officer at the NRC, during which time he served as the technical coordinator for the NRC's inquiry into the 1979 accident at Three Mile Island. Dr. Budnitz earned a Ph.D. in physics from Harvard University in 1968.

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<sup>10</sup> Conflicts of interest guidelines are set forth in Section I.C of the second restated charter. They establish limits for DCISC members on income and gifts from PG&E or an affiliated company, and investments in PG&E or an affiliate. They also prohibit members of the DCISC from attempting to use their position to influence action of the Committee in which they have a financial interest. DCISC members are required to file a Statement of Economic Interest in the same manner as designated CPUC employees. No person shall serve on the DCISC who has a prior history of supporting or opposing PG&E as a witness or intervenor in nuclear licensing or CPUC proceedings associated with the Diablo Canyon Power Plant.

Dr. Budnitz has no conflicts of interest that would preclude his continuing to serve on the DCISC.<sup>11</sup> His qualifications show that he has the requisite knowledge, background, and experience in the field of nuclear power plants and nuclear safety issues.

**Dr. Najmedin Meshkati is qualified to serve on the Diablo Canyon Independent Safety Committee.**

Dr. Meshkati is a Professor of Civil/Environmental Engineering, Industrial & Systems Engineering, and International Relations at the University of Southern California, where he has taught for 35 years, created a Nuclear Energy option in one of the engineering programs, and created and taught graduate level courses about nuclear safety and safety culture. His expertise in human-systems integration, and safety culture helped him serve as a member and technical advisor on a national panel convened to determine lessons learned from the Fukushima Nuclear Accident and recommend safety and security improvements for U.S. nuclear plants accordingly. Additionally, Dr. Meshkati has researched, visited, and inspected nuclear plants around the world including Chernobyl and Fukushima Daiichi; received research grants from the NRC; attended and given talks on his nuclear safety research at national and International Atomic Energy Agency (IAEA) conferences; and he had written and testified to the U.S. Commission on Improving the Effectiveness of the United Nations on the importance of the IAEA for global nuclear safety. Dr. Meshkati has a Ph.D. in industrial systems engineering from USC; an M.S. in Engineering Management; and a B.S. in Industrial Engineering and a B.A. in Political Science from Sharif (Arya-Meher) University of Technology in Iran and Shahid Beheshti University (National University of Iran), respectively.

Dr. Meshkati has no conflicts of interest that would preclude his serving on the DCISC. His qualifications show that he has knowledge, background, and experience in the field of nuclear power plants and nuclear safety issues.

**Dr. Michael Quinn is qualified to serve on the Diablo Canyon Independent Safety Committee.**

Dr. Quinn has spent over forty years in the nuclear industry: since 1999 he has facilitated regulatory compliance, reliability assessments, and performance improvement in the commercial nuclear power industry; during the 25 years prior he

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<sup>11</sup> By email to Energy Division staff dated December 17, 2021 Dr. Budnitz confirmed that he has no conflicts of interest as set forth in Section I.C. of the second restated charter.



worked in the power block of a nuclear unit for a large nuclear utility. His experience includes developing and delivering root cause evaluation training to NRC staff, assessing significant issues during refueling operations at nuclear power plants, and leading root cause assessments at nuclear facilities. Dr. Quinn has also managed teams that developed and implemented corrective actions to address performance at over 25 nuclear facilities/units – including Diablo Canyon – and for three regulators in the United States and Canada. He has led teams in developing, implementing, and evaluating programs to establish a safety culture at nuclear power plants. Dr. Quinn has experience facilitating the shutdown of nuclear plants: maintaining operational excellence as closure approaches, retaining staff and addressing their concerns, and working to uphold plant safety culture and a safety conscious work environment. Dr. Quinn has taught nuclear safety event causal analysis to the U.S. Nuclear Regulatory Commission, the Canadian Nuclear Safety Commission, and the Japan Nuclear Regulation Authority. Dr. Quinn has a Doctorate in Organizational Management Systems and an Executive Master of Business Administration degree, both from the University of New Haven, and a B.S. degree in Chemistry from Charter Oak College. He previously held a U.S. NRC Senior Reactor Operator License on a Westinghouse pressurized water reactor, and is a Certified Root Cause Investigator, Certified Root Cause Training Instructor, and Certified Radiation Safety Officer.

Dr. Quinn has no conflicts of interest that would preclude his serving on the DCISC. His qualifications show that he has knowledge, background, and experience in the field of nuclear power plants and nuclear safety issues.

**The candidates nominated by the Commission are the most qualified candidates from the pool of applicants.**

The CPUC's President, Alice Reynolds, has reviewed the qualifications, experience, and backgrounds of all the applicants and selected Dr. Robert Budnitz, Dr. Najmedin Meshkati, and Dr. Michael Quinn for submission to the California Attorney General as candidates for the three-year DCISC position beginning July 1, 2022.

**President Reynolds' selection of Dr. Robert Budnitz, Dr. Najmedin Meshkati, and Dr. Michael Quinn as the candidates for the July 1, 2022 vacancy on the Diablo Canyon Independent Safety Committee is ratified.**

President Reynolds' selection of Dr. Budnitz as a candidate for reappointment, and Dr. Meshkati and Dr. Quinn as candidates for appointment to the DCISC for a three-year term beginning July 1, 2022 is ratified. As mentioned above, President Reynolds



recognizes that all of the applicants possess the qualifications to competently serve on the DCISC. The President's selections shall be provided to the Attorney General.

### COMMENTS

Public Utilities Code section 311(g)(1) provides that this resolution must be served on all parties and subject to at least 30 days public review. Please note that comments are due 20 days from the mailing date of this resolution. Section 311(g)(2) provides that this 30-day review period and 20-day comment period may be reduced or waived upon the stipulation of all parties in the proceeding.

~~The 30-day review and 20-day comment period for the draft of this resolution was neither waived nor reduced. Accordingly, this draft resolution was mailed to parties for comments, and will be placed on the Commission's agenda no earlier than 30 days from today.~~

As no comments were submitted, no substantive changes were made to this Resolution.

### FINDINGS

1. D.88-12-083 created the Diablo Canyon Independent Safety Committee (DCISC).
2. The DCISC is an independent, three-member committee responsible for monitoring the safety of PG&E's operation of the Diablo Canyon Power Plant.
3. D.07-01-028 adopted a restated charter for the DCISC including revised procedures for appointments of DCISC members.
4. D.21-09-003 ordered the submission of a second restated charter in an advice letter. The second restated charter for the DCISC was submitted in Advice Letter 6361-E and approved on December 9, 2021
5. On December 16, 2021, in accordance with D.21-09-003 and Advice Letter 6361-E, an announcement was posted on the CPUC's website seeking applications for the July 1, 2022 vacancy on the DCISC.
6. The California Attorney General is the appointing authority for the July 1, 2022 vacancy on the DCISC.
7. Dr. Robert Budnitz, the incumbent member of the DCISC whose term expires on June 30, 2022, responded to the CPUC's December 16, 2021 announcement and consents to being a candidate for reappointment to the DCISC.

8. Dr. Najmedin Meshkati, a Professor of Civil/Environmental Engineering, Industrial & Systems Engineering, and International Relations, responded to the CPUC's December 16, 2021 announcement, and submitted an application to be considered as a candidate for appointment to the DCISC.
9. Dr. Michael Quinn, a professional nuclear energy consultant, responded to the CPUC's December 16, 2021 announcement, and submitted an application to be considered as a candidate for appointment to the DCISC.
10. The CPUC invited comments on Dr. Budnitz's, Dr. Meshkati's, and Dr. Quinn's qualifications in an announcement posted on the CPUC's website on February 24, 2022.
11. Comments supporting the appointment of Dr. Budnitz, Dr. Meshkati, and Dr. Quinn to the DCISC were received in response to the CPUC's February 24, 2022 announcement inviting comments.
12. The CPUC's President, Alice Reynolds, has reviewed the qualifications, experience, and backgrounds of Dr. Budnitz, Dr. Meshkati, and Dr. Quinn.
13. Dr. Budnitz, Dr. Meshkati, and Dr. Quinn have knowledge, background, and experience in the field of nuclear power plants and nuclear safety issues and are qualified candidates for appointment to the DCISC.
14. President Reynolds has chosen to provide the names of Dr. Budnitz as a candidate for reappointment, and Dr. Meshkati and Dr. Quinn as candidates for appointment to the DCISC for a three-year term beginning July 1, 2022.
15. President Reynolds' selection of Dr. Budnitz, Dr. Meshkati, and Dr. Quinn as the candidates for appointment to the DCISC for a three-year term beginning July 1, 2022 should be ratified and provided to the California Attorney General.

**THEREFORE IT IS ORDERED THAT:**

1. President Reynolds' selection of Dr. Budnitz, Dr. Meshkati, and Dr. Quinn as qualified candidates for consideration by the California Attorney General for appointment to the Diablo Canyon Independent Safety Committee for a three-year term beginning July 1, 2022, is hereby ratified.

This Resolution is effective today.

I certify that the foregoing resolution was duly introduced, passed, and adopted at a conference of the Public Utilities Commission of the State of California held on June 2, 2022; the following Commissioners voting favorably thereon:

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Rachel Peterson  
Executive Director

## APPENDIX A

The following statements were supplied by the applicants as part of the application process and were available for public review and comment starting on February 24, 2022. The assertions of fact contained within these statements have not been disputed. These statements are provided verbatim.

**Dr. Robert J. Budnitz (Incumbent)**

Dr. Robert J. Budnitz is currently an incumbent member of the Diablo Canyon Independent Safety Committee (DCISC), serving a term that began July 1, 2019 and will end June 30, 2022, as appointed by then Attorney General Xavier Becerra. Dr. Budnitz was originally appointed to the DCISC by then Attorney General Edmund G. Brown Jr. in 2007 for a term that ran through mid-2010. He is currently the chair of the DCISC.

In addition to his role on the DCISC, Dr. Budnitz retired in 2017 from the scientific staff at the University of California's Lawrence Berkeley National Laboratory (LBNL), where he worked on nuclear power safety and security. He currently works as a consultant, advising on reactor safety both domestically and internationally. He is a member of the National Academy of Engineering. He has also been honored by being named a Fellow of the American Nuclear Society, the American Physical Society, the Society for Risk Analysis, and the American Association for the Advancement of Science. His current research is largely in the area of the seismic safety of nuclear reactors, most of which is supported by the U.S. Nuclear Regulatory Commission (NRC) and the U.S. Department of Energy (DOE). From 2002 to 2007, he was employed at UC's Lawrence Livermore National Laboratory; during part of that period, he also worked on a two-year special assignment in Washington D.C. assisting the Director of DOE's Office of Civilian Radioactive Waste Management to develop a new Science & Technology Program for the Yucca Mountain Project. Dr. Budnitz additionally serves on advisory and standards-development committees for organizations such as the American Nuclear Society and the American Society of Mechanical Engineers.

From 1967 to 1978, Dr. Budnitz was on the staff of the Lawrence Berkeley National Laboratory, serving in 1975-1978 as Associate Director and Head of LBNL's Energy & Environment Division. The programs under his direction included energy-efficiency, deep-geologic radioactive waste disposal, solar energy, geothermal energy, fusion energy, transportation technology, chemical-engineering for alternate fuels, environmental instrumentation, air-pollution phenomena, and energy policy analysis.

From 1978 to 1980, he was a senior officer on the staff of the NRC. In 1978-1979, he was the Deputy Director, NRC Office of Nuclear Regulatory Research, and in 1979-1980 he became the Director of that same Office. In that position, Dr. Budnitz was responsible for formulating and guiding the large NRC research program that constituted over \$200 million/year at the time. His responsibilities included assuring that all major areas of reactor-safety research, waste-management research, and fuel-cycle-safety research necessary to serve the mission of the NRC were adequately supported. Additionally,

following the Three Mile Island reactor accident, Dr. Budnitz served the last 7 months of 1979 as the “technical coordinator” of the important NRC internal inquiry examining the accident, known as the “Special Inquiry Group.”

After leaving the NRC in 1980 and until late 2002, Dr. Budnitz worked as a private consultant on reactor safety, radioactive waste, and related subjects, as president of Future Resources Associates, Inc., a small firm he founded in Berkeley in 1981. His clients included both industrial and governmental organizations. A majority of his research support in the post-1981 period came from governmental sources, including NRC, DOE, and the U.S. Environmental Protection Agency, as well as international and intergovernmental organizations such as the International Atomic Energy Agency in Vienna, the OECD Nuclear Energy Agency in Paris, and the European Bank for Reconstruction and Development in London. After the downfall of the Soviet Union in 1991, an international program was assembled by several western nations to assist the operators of Soviet-designed reactors in Russia and several other countries to evaluate and then to upgrade their safety. Dr. Budnitz played a leading role in that multi-national effort for about 15 years. One of those projects, advising the government of Armenia on the safety of their old Soviet-designed reactor, remains an active project for Dr. Budnitz today, nearly 30 years later.

After the serious Japanese reactor accident at Fukushima in March 2011, caused by an earthquake-triggered tsunami that flooded the site and damaged 4 of the 6 reactors on-site, the U.S. Secretary of Energy and President Obama’s Science Adviser appointed a special “science panel” to advise them about the best way early-on to interpret the incomplete technical information that was available from Japan, and about how best the U.S. might assist the Japanese in responding. Dr. Budnitz served on that high-level panel for the duration of 2011.

Some of Dr. Budnitz’s other assignments include serving as chairman of an OECD/NEA international Specialist Meeting that evaluated the adequacy of our current understanding of possible terrorist attacks on nuclear facilities, a few months after the terrorist attacks on New York and Washington on 9/11/2001; he chaired the “Senior Seismic Hazards Analysis Committee” (the “SSHAC committee”) supported by DOE, NRC, and the Electric Power Research Institute, that developed an advanced probabilistic seismic hazard methodology, published in 1997, which has now become the commonly accepted way to do this type of hazard analysis and was used recently in the most advanced studies of the seismic hazards at the Diablo Canyon site; he chaired both the NRC’s “Expert Panel on Seismic Margins” that developed the widely-used seismic-margin methodology for assessing the seismic capabilities of existing nuclear

facilities, and the DOE's "Senior External Events Review Group" that advised DOE on seismic and wind design criteria for their proposed new production reactor design; and he chaired the "Committee on Remediation of Buried and Tank Wastes" for several years for the National Research Council/National Academy of Sciences under the Board on Radioactive Waste Management. Dr. Budnitz has also performed research in and worked extensively in the fields of nuclear-reactor safety, high-level-waste safety, and nuclear-facility safety assessment, including probabilistic risk assessment.

Dr. Budnitz earned a Ph.D. in physics from Harvard University in 1968, an M.A. in physics from Harvard in 1962, and a B.A. in physics from Yale University in 1961.



**Dr. Michael Quinn**

Michael Quinn has invested 40-plus years into the public health and safety of the nuclear power industry, entailing 25 years in power block operations at a nuclear power station, and during the past 22 years as an executive operations assessor and consultant to the commercial nuclear industry in the U.S. and Canada.

Dr. Quinn's expertise entails but is not limited to nuclear safety; nuclear operations; significant operational event assessments; nuclear program inspection and performance evaluation; technical program rigor; high reliability and corrective action program/human performance/safety culture program implementation.

Throughout his career, Michael has brought the tenets of Compliance, Integrity, Transparency, and Competency to nuclear power facilities and high-reliability organizations with whom he has been engaged.

**What Dr. Quinn can bring to the DCISC:**

- Current and comprehensive nuclear safety and operations assessment and Evaluation experience in dozens of nuclear facilities since 2000 (refer to the following 'Current' details)
- Prior to 2000, 25 years of actual, in-house, nuclear operations licensee experience at two nuclear power stations through all operational modes, including 13 Refueling and Maintenance Outages
- Experience as a Senior Reactor Operator Licensed Director and Duty Officer (US NRC License No. 10071); SRO licensed for 15 years

**Current Nuclear Operations Experience: Nuclear Licensees, Nuclear Regulators, and Nuclear Suppliers**

Consistent with the activities the DCISC provides in its independent assessment of Diablo Canyon operations, Dr. Quinn has provided the same, plus additional assessment service initiatives to over 25 nuclear facilities/units and for three regulators in the United States and Canada since 2000. An overview:

- Provided requested assessment to 'unplanned' nuclear events at 16 nuclear power units in the United States and Canada
- Performed program and operational assessments at 13 nuclear licensee units or facilities
- Conducted Organizational Safety Culture assessment, remediation, and consulting with 10 nuclear organizations

- Developed Technical Engineering and Operational Rigor shortcoming assessments including 15 nuclear safety-related units/facilities (e.g., a large Department of Energy engineering remediation project for management of 50MM gallons of nuclear mixed waste; and an Independent Spent Fuel Storage Installation [ISFSI])
- Taught Operational and Event Causal Analysis (a 24-hour course) over 40 times to the US Nuclear Regulatory Commission, entailing hundreds of Inspectors and technical staff; contracted into 2023  
(in this course teaches NRC staff how to evaluate nuclear station event analysis reports and their associated corrective action implementation effectiveness)
- Taught Operational and Event Causal Analysis (a 24-hour course) to the Japan Nuclear Regulation Authority (JNRA) staff
- Taught Operational and Event Causal Analysis (a 24-hour course) to the Canada Nuclear Safety Commission (CNSC) staff
- Conducted Operational Reliability assessments impacting 16 nuclear facilities
- Provided causal analysis [root cause] training to 17 nuclear units/facilities and nuclear suppliers in the US and Canada

Over the past 22 years Dr. Quinn has been engaged by nuclear organizations in the safe operation of nuclear units, as well as in the operational, new build, refurbishment, decommissioning and spent nuclear fuel storage installation sectors of the nuclear industry in the U.S. and Canada. On the regulatory side, during the 2006-2022 period he has trained U.S. NRC resident inspectors and regional office technical staff on methods to evaluating significant nuclear licensee operational events and processes, with a focus on nuclear safety and the three cross-cutting areas of *Human Performance, Problem Identification and Resolution (PI&R), and Safety Culture*.

During the past 20-plus years, Michael has been, and is presently: advising on performance improvement; conducting program and operational assessments of nuclear licensee organizations; leading/performing root cause evaluations on significant nuclear events; and leading recovery project management for nuclear licensees and suppliers. His primary focus is on nuclear safety and the three cross-cutting areas.

In addition, Dr. Quinn continues to evaluate and to remediate licensee and supplier organizational and corrective action programs; providing PI&R, Human Performance, and Safety Culture consulting, coaching, assessment, and training. He provides related consulting services to several nuclear industry sectors, including: the commercial nuclear power industry in the U.S. and Canada; U.S. Government (e.g., U.S. NRC, U.S. Department of Energy); nuclear supplier organizations - large nuclear steam

supply system providers (e.g., Westinghouse and Mitsubishi); as well as smaller nuclear suppliers to the industry.

From a major nuclear industry 'campaign' perspective, Dr. Quinn has been/is engaged in many industry issue campaigns and challenges that include/have included:

- Nuclear fuel handling, storage, cask operations
- Safety culture challenges to nuclear operations
- Safeguards at operating and decommissioning nuclear units
- Technical program rigor and quality challenges resulting in non-compliances
- Independent Spent Fuel Storage Installations (ISFSI) operations and events
- Radioactive effluents and radioactive waste treatment; Groundwater tritium
- Radiological/ trans-uranic worker uptake events
- Corrective action program and 10CFR50 Appendix B Criteria challenges
- Post-accident response and subsequent upgrades (NUREG 0737)
- Containment sump screen upgrade (GSI-191)
- And very importantly, the impact that a 'final shutdown decision' (as Diablo Canyon is facing in 2024-2025) has had on nuclear station staffs' performance while attempting to maintain focus on operational excellence. Experience includes maintaining operations 'within the envelope,' key staff retention, addressing increases in event frequency and severity, increased employee concerns, and safety culture/ safety conscious work environment (SCWE) declines, amongst others.

Starting in 2006 and continuing into 2022, Dr. Quinn has trained U.S. NRC inspectors and technical staff in a concentrated three-day workshop to evaluate significant nuclear safety licensee events, training over 600 U.S. NRC inspectors and technical staff during 40+ deliveries. He is contracted into 2023. In 2017, Dr. Quinn was requested to present this training to the first cohort from the Japan Nuclear Regulation Authority, and in later 2017, he was requested to present this training to the first cohort of the Canadian Nuclear Safety Commission.

Dr. Quinn is the only individual who has taught nuclear safety event causal analysis evaluation to the US Nuclear Regulatory Commission, the Japan Nuclear Regulation Authority, and the Canadian Nuclear Safety Commission.

Since 2001, Dr. Quinn has presented workshops and seminars on current nuclear safety industry issues and challenges at industry conferences and forums in the US and Canada, as well as for the International Atomic Energy Agency (IAEA) and Argonne National Laboratory. He has also taught 20+ courses in Management Systems, Strategy,

Organizational Behavior, and Organizational Management at two Connecticut universities.

### **Nuclear Operations Experience within the Power Block 1975-1999**

While in the power block of a pressurized water reactor unit with a large nuclear utility from 1975 to 1999, Michael earned a U.S. NRC Senior Reactor Operator License on a Westinghouse Pressurized Water Reactor unit, and held leadership positions that included Director of Nuclear Station Services; Nuclear Station Duty Officer; Chair-Nuclear Plant Operations Review Committee [operations oversight including 50.59 Reviews]; Corrective Action Review Board (CARB) Chair; Director of Nuclear Station Emergency Operations (DSEO); Refueling and Maintenance Outage Shift Manager; Manager of Chemistry and Radiochemistry; and Project Manager, reporting to the President, on a three-unit, four-year Nuclear Station Recovery Team.

During this time frame Michael was a member of the senior station leadership team at Haddam Neck Station, a nuclear unit that consistently performed at U.S. NRC SALP-1 and INPO-1 performance levels (presently termed U.S. NRC ROP Column 1 and INPO-1 respectively).

### **LICENSES/ CERTIFICATIONS CONTRIBUTORY TO A POTENTIAL POSITION ON THE DCISC:**

- U.S. NRC Senior Reactor Operator License #10071 on a Westinghouse PWR (Diablo Canyon is a Westinghouse PWR NSSS design)
- Certified Root Cause Investigator (Nuclear Safety Review Concepts Event Evaluation and PII)
- Certified Root Cause Training Instructor
- Certified Radiation Safety Officer

Michael earned a Doctorate in Organizational Management Systems (organizational system dynamics) and preceding that effort he had completed an Executive Master of Business Administration degree and had earned a Bachelor of Science degree in Chemistry.

Michael's collective current and past nuclear power experience is congruent with the Diablo Canyon Independent Safety Committee's (DCISC) mission and requirements. He can bring current and comprehensive assessment experience in nuclear operations, decommissioning, and **Independent Spent Fuel Storage**

**Installation** (ISFSI) management to supplement the depth and breadth of the DCISC team.

Dr. Quinn has a demonstrated history of articulating his evaluations in an objective, empirically-based, and plain language manner to a spectrum of stakeholders (e.g., utility commissions, the public, station staff, utility staff, state and federal regulators, interest groups, and the boardroom).

In summary, Michael offers current and comprehensive nuclear industry assessment and evaluation experience that support consideration of his candidacy for a role on the Diablo Canyon Independent Safety Committee.

On a personal note:

- For the most recent nine years, Dr. Quinn has served on the Connecticut Community Care Inc. (CCC) Board of Directors, a non-profit health care service provider of 250 employees who are responsible for over 9,000 medically compromised individuals in need.
- Michael, after serving as Chair of the Board, recently rotated off per the CCC Charter requirement to serve no more than three consecutive three-year terms. During his tenure as Chair of the Board, Dr. Quinn helped guide the CCC organization, and the Board, through 2020-2021 with effective response to the Coronavirus impact on the organization's 9000 clients in Connecticut.
- Dr. Quinn is a four-decade American Red Cross blood donor.

LinkedIn: <https://www.linkedin.com/in/quinnmd/>

**Dr. Najmedin Meshkati's**

The following is a synopsis of University of Southern California (USC) Professor Najmedin Meshkati's qualifications and experience in nuclear safety. For the past 35 years at USC, he has taught and conducted research on the safety, risk reduction, and reliability enhancement of complex technological systems, including nuclear power plants.

*A Short Biography*

Dr. Najmedin Meshkati is a (tenured, full) Professor of Civil/Environmental Engineering, Industrial & Systems Engineering; and International Relations at the University of Southern California (USC); an Associate (ex-Research Fellow) with the Project on Managing the Atom at Belfer Center for Science and International Affairs at Harvard Kennedy School; and has been an Associate with the Mossavar-Rahmani Center for Business and Government at Harvard (2018-2020).

Meshkati was a Jefferson Science Fellow and a Senior Science and Engineering Advisor, Office of Science and Technology Adviser to the Secretary of State, US State Department, Washington, DC (2009-2010). He is a member of two boards of the National Academies of Sciences, Engineering, and Medicine (NASEM): Board on Human-Systems Integration (BOHSI) and Gulf Offshore Energy Safety (GOES) Board.

The NASEM selected Meshkati for his interdisciplinary expertise concerning human-systems integration, and safety culture, and he served as a member and technical advisor on two national panels in the United States investigating two major recent accidents: The "Committee on Lessons Learned from the Fukushima Nuclear Accident for Improving Safety and Security of U.S. Nuclear Plants" (2012-2014); and "Committee on the Analysis of Causes of the Deepwater Horizon Explosion, Fire, and Oil Spill to Identify Measures to Prevent Similar Accidents in the Future" (2010-2011).

Meshkati has conducted research on sixteen and visited and inspected ten nuclear power plants worldwide, including Chernobyl (1997), Fukushima Daiichi, and Daini (2012). As Principal Investigator (PI), he has had research grants from the US Nuclear Regulatory Commission (NRC); attended and given talks based on his research at many national and International Atomic Energy Agency's (IAEA) conferences on nuclear safety in the last twenty years. The last IAEA conference was in 2016, for the 30th anniversary of the Chernobyl accident. He also wrote extensively and gave

testimonies to the US Commission on Improving the Effectiveness of the U.N. on the importance of IAEA for global nuclear safety in 1993.

As a co-PI of an NRC-funded project which created a new Nuclear Energy option in the MS degree Mechanical Engineering at the University of Southern California (USC), Meshkati developed and taught two graduate courses: CEE 571, “Nuclear Safety and Security: Human Performance and Safety Culture”; and CEE 599, “Complex Systems Safety and Resiliency: Safety Culture, Systems Design & Integration.”

Meshkati is an elected Fellow of the Human Factors and Ergonomics Society (HFES); one of the eighteen “Titans of HFES”; the 2015 recipient of the HFES highest award, the *Arnold M. Small President’s Distinguished Service Award*, for his “career-long contributions that have brought honor to the profession and the Society”; and the 2007 recipient of the HFES *Oliver Keith Hansen Outreach Award* for his “scholarly efforts on human factors of complex, large-scale technological systems.” He is an AT&T Faculty Fellow in Industrial Ecology, a NASA Faculty Fellow (Jet Propulsion Laboratory, 2003 and 2004), and a recipient of the *Presidential Young Investigator Award* from the National Science Foundation (NSF) in 1989.

Meshkati simultaneously received a B.S. in Industrial Engineering and a B.A. in Political Science in 1976, from Sharif (Arya-Meher) University of Technology in Iran and Shahid Beheshti University (National University of Iran), respectively; an M.S. in Engineering Management in 1978; and a Ph.D. in Industrial and Systems Engineering in 1983 from USC. He is a Certified Professional Ergonomist (CPE # 650).

The following is a small sample of Dr. Meshkati’s nuclear safety-related articles in the last few years which could be relevant to the mission and thrust of the DCISC:

[10 Years after Fukushima, Safety is Still Nuclear Power’s Greatest Challenge.](#)

[Co-authored with Dr. Kiyoshi Kurokawa, March 27, 2011, The Conversation. (Has been translated into Spanish ([Diez Años Después de Fukushima la Seguridad Sigue Siendo el Mayor Reto de la Energía Nuclear](#)), Catalan, Italian, and Vietnamese; and reprinted in many newspapers, websites, and blogs around the world (Singapore, Australia, Spain, Italy, New Zealand, Philippines, etc.) and cross-posted by, e.g., American Nuclear Society’s Nuclear Newswire, *Popular Science*, Yahoo News, Associated Press.)]



[Thirty-three Years Since the Catastrophe at Chernobyl: A Universal Lesson for the Global Nuclear Power Industry](#). [Co-authored with Prof. Serhii Plokhii, April 25, 2019, Belfer Center for Science and International Affairs, Harvard Kennedy School].

[How to Deal with Increasingly Complex Safety-Critical Technologies: Public Policy Recommendations from the Control Room of the Three Mile Island Nuclear Reactor to the Cockpit of the Boeing 737 Max](#). [Co-authored with Dr. Sebastien Philippe, March 28, 2019, March 28; Belfer Center for Science and International Affairs, Harvard Kennedy School].

[Onagawa: The Japanese nuclear power plant that didn't meltdown on 3/11](#), *Bulletin of the Atomic Scientists*, [Co-authored with former industrial engineering undergraduate student, Ms. Airi Rue, March 10, 2014].

**END OF APPENDIX A**

## **APPENDIX B**

The following are all of the public comments submitted regarding the applicants for the Diablo Canyon Independent Safety Committee. The comments are presented in chronological order and are provided verbatim.

March 1, 2022

Dear Mr. Zizmor, Esq.,

In response to the invitation for public comments on the qualification of the candidates for appointment to the Diablo Canyon Independent Safety Committee (DCISC), documented in your email dated February 24, 2022, I would like to provide my comments on the candidacy of Dr. Robert Budnitz.

Dr. Robert Budnitz, the incumbent member of the DCISC, has served the Committee with a tenure of more than ten years, and with distinction. He is an internationally recognized expert on seismic reactor safety, and has served on numerous domestic and international committees on seismic matters, involving major technical or policy issues. As seismic safety is one of the significant safety issues the Committee is chartered to review, the continuing service of Dr. Budnitz is important for the Committee to fulfill its many duties and obligations.

I am providing my comments as a member of the public, and not as a current member of the DCISC.

Sincerely yours,

Peter Lam, Ph.D.

Administrative Judge Emeritus

**To the attention of: David Zizmor, Esq.**

March 14, 2022

Public Utilities Regulatory Analyst

California Public Utilities Commission – Energy Division

Dear Mr. Zizmor:

Pursuant to the CPUC's February 24, 2022 notice seeking public comment on Diablo Canyon Independent Safety Committee (DCISC) candidates, I wish to endorse the candidacy of Dr. Najmedin Meshkati.

It is a pleasure and privilege to most enthusiastically endorse the candidacy of Dr. Meshkati. As evidenced by his professional credentials and accomplishments Dr. Meshkati is an internationally respected authority in the field of risk reduction in complex technological systems. While his expertise spans a broad spectrum of technical and scientific endeavors, including health care, I know Dr. Meshkati best from his many years of contributions in the field of nuclear energy.

For context, before retirement I worked for four decades in nuclear power including commercial nuclear power plants, the Institute of Nuclear Power Operations, and the U.S. Department of Energy including special assignments with the International Atomic Energy Agency. My primary role was as a specialist in human and organizational factors for safe nuclear operations. In the 1980's I conducted safety inspections at Diablo Canyon and served in as a consultant for the restart of Rancho Seco and subsequently for the safe closure of that plant. In retirement I serve as consulting advisor for DOE and IAEA.

I have had the pleasure of knowing Dr. Meshakati personally and professionally for two decades. The state of California has been home for him and his family for some 40 years. During that time, he has distinguished himself and his beloved University nationally and internationally acquiring multi-discipline expertise of technical, human/organizational factors and governmental scientific policy that set him apart as unique in his scholarly and applied fields of knowledge.

From my professional experience I appreciate that the scope of DCISC responsibilities in the future will require expertise far beyond the typical (though substantial) technical knowledge and experience of nuclear power plant operations. The decisions to cease power operations at Diablo Canyon placed the plant on a complicated trajectory toward shutdown during which hazard profiles will change substantially over time, along with commensurate change in knowledge necessary to safely navigate the ultimate fate of

the plant. As the plant approaches shut down the workforce begins to change significantly; this shift probably began soon after the decisions were made. Often the most capable professionals seek employment elsewhere, and those of longest tenure with irreplaceable historical knowledge find it in their personal interest to retire. Long experienced staff begin to be replaced by contractors and subcontractors. The nature of the work and the hazards associated with the work begin to transition into configurations that have never before been experienced by the operating staff and infrequently experienced by regulators or decisions makers. And should the fate of the plant be reconsidered in light of international conflicts or other factors important to the future of the State, the decision calculus for protecting public safety would become even more complex.

While several plants have shut down in the U.S., the knowledge of the processes by which that is accomplished is relatively scarce. There is a somewhat documented knowledge base of the technical processes, however knowledge related to the human and organizational factors is even rarer. It is in that particular arena that Dr. Meshkati stands apart from the other quite distinguished candidates.

In February this year Dr. Meshkati was selected as one of the “Titans” of the Human Factors and Ergonomics Society (HFES). HFES is the world’s largest scientific association for human factors/ergonomics professionals. Previously in 2015 HFES presented to Dr. Meshkati the society’s highest honor, the Arnold M. Small President’s Distinguished Service Award, for his “career-long contributions that have brought honor to the profession and the society.” Dr. Meshkati’s investigations, analyses and scholarship about the human, organizational and safety culture factors associated with server accidents, such a Fukushima nuclear plant disaster in Japan, are well known and admired. Recently he was asked to comment on the dangers associated with the Russian invasion of Ukraine and seizure of the Zaporizhzhya nuclear plant. His astute commentary focused on the human factors as the most concerning and most venerable aspect of that atrocity; recognizing that human operators and workers always constitute society's first and last layer of defense. Returning to the more local focus on California and Diablo Canyon, the research of Dr. Meshkati and his students on the role of "Leadership Safety Values and Actions" in the checkered history of Pacific Gas and Electric management is further illustration of his ability to discern causal factors beyond the technical, often tracing responsibility beyond technical and worker ‘error’ to allocate, when appropriate, fundamental accountability to those who wield authority and budgets to the disservice of the public.

Dr. Meshkati's technical and professional qualifications for selection to the DCISC are unassailable. Beyond that, he is known by his colleagues as a consummate professional; dedicated to the integrity of his profession; dedicated to the education of future leaders of science, technology, industry and government; dedicated to the safety and well-being of the United States and all peace-loving nations; and dedicated to the safety and well-being of the people of his beloved home state of California.

With gratitude to the Commission for the opportunity to comment on this vitally important appointment, it is an honor and distinct privilege to endorse and recommend selection of Dr. Najmedin Meshkati as a member of the Diablo Canyon Independent Safety Committee.

Respectfully,

W.E. Carnes

Senior Advisor, U.S. DOE (retired)

Myrtle Beach, S.C.



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March 17, 2022

David Zizmor  
California Public Utilities Commission  
505 Van Ness Avenue  
Energy Division, Fourth Floor  
San Francisco, CA 94102

Via email: [david.zizmor@cpuc.ca.gov](mailto:david.zizmor@cpuc.ca.gov)

Re: Diablo Canyon Independent Safety Committee  
Appointment of Dr. Michael Quinn—SUPPORT

Dear Mr. Zizmor:

The Alliance for Nuclear Responsibility would like to support the nomination of Dr. Michael Quinn to the Diablo Canyon Independent Safety Committee (DCISC) as the appointee of the California Attorney General.

The Alliance's mission includes monitoring ratepayer investments to improve safety and mitigate environmental damage from the operation of the state's last aging reactor. The DCISC is charged with monitoring safety oversight at Diablo Canyon. However, as their charter is a creation of the CPUC, no less an obligation should be their consideration of ratepayer impacts, for safety—or the lack thereof—comes at a price.

These oversight concerns grow more pressing as Diablo Canyon enters its final years, and much of the infrastructure nears the end of its life expectancy. Among the issues would be:

- How and who will monitor PG&E's maintenance of the appropriate level of capital improvement needed for the remaining years of operation?
- How will workforce morale and diligence be maintained as the PG&E corporation writ large deals with bankruptcy and the legal ramifications of their criminal negligence?



## PG&amp;E/Diablo Canyon Independent Safety Committee/DZ1

- How and who will monitor the NRC's oversight with regards to waivers that may or may not be issued for repairs and upgrades, given the shortened plant life?
- Who will have the experience needed to oversee the impending post-shutdown activities of spent fuel storage and transfer to dry casks and the ISFSI?

The current DCISC members have been in place for over a decade and regrettably collegiality has given way to complacency. As the Alliance has previously noted, even the NRC—which has genuine regulatory authority over the facility—has a time limit of only seven years that a resident inspector may remain on site to prevent complacency.

In previous recommendation letters for candidates (such as Dr. Quinn) the Alliance has pointed out examples from the recordings of DCISC public meetings where the current committee members offer uncritical praise for PG&E's efforts, only to be faced with the need to analyze subsequent failure to deliver by PG&E (Unit 2 main generator incident of 2002). With all due respect to the long-term tenure of the current candidate, it is far past due to have fresh eyes examining an increasingly geriatric and frail patient.

That is why the Alliance welcomes the candidacy of Dr. Quinn to the DCISC. Today, faced with an increasing number of "root cause analysis" situations at Diablo Canyon (from the main generator to the AFW piping), only his resume indicated specialized training and experience in that area.

While it is true that all the candidates show strong backgrounds with nuclear science and regulation, Dr. Quinn's resume stands out for its emphasis on the *practical*. He has actual plant operation experience and has held a licensed Senior Reactor Operator credential. In addition to numerous technical positions, his career features additional areas of concentration (as was the focus of his Ph.D) in *the management and human relations aspects* of operating complex, technical systems. As such, only his curriculum vitae acknowledges this changed situation for Diablo Canyon:

"And very importantly, the impact that a 'final shutdown decision' (as Diablo Canyon is facing in 3-4 years) has had on nuclear station staffs' performance while attempting to maintain focus on operational excellence. Experience includes maintaining operations 'within the envelope,' key staff retention, addressing increases in event frequency and severity, increased employee concerns, and safety culture/ safety conscious work environment (SCWE) declines, among others."

Of the current candidates, Dr. Quinn's recognition of Diablo's changed status is unique, and we believe a valuable insight into his thought process and expertise.

The human performance aspects of nuclear power operations are likely to be looming as large as the technical considerations in these final countdown years to closure. The experiences of a candidate such as Dr. Quinn in identifying and working to mitigate any shortcomings that could impact reactor operations and public safety would be welcomed by ratepayers and stakeholders alike.

As well, Dr. Quinn's tenure at nuclear plants in Connecticut includes the time in which those facilities transitioned from operation to decommissioning. As Diablo approaches this phase in less than three years, his experiences will be valuable; it is not found in the CVs of the other candidates.

The Alliance for Nuclear Responsibility endorses Dr. Michael Quinn for appointment to the Diablo Canyon Independent Safety Committee.

Yours truly.

/s/

Rochelle Becker  
Executive Director  
Alliance for Nuclear Responsibility

Matthew W. Sunseri  
11495 FM 1486 Rd.  
Richards, Texas 77873

**David Zizmor, Esq.**  
Public Utilities Regulatory Analyst  
California Public Utilities Commission – Energy Division  
505 Van Ness Avenue  
San Francisco, CA 94102  
(415) 703-1575

March 21, 2022

Nomination of Dr. Michael D. Quinn, Diablo Canyon Independent Safety Committee (DCISC)

Dear Mr. Zizmor,

I am Matthew Sunseri, a nuclear industry professional for over 40 years. I have served as president and chief nuclear officer at a commercial nuclear operating company in the US before retiring. As an industry consultant currently, I serve as chairman of an independent safety board for a nuclear facility in Canada, I chair the board of directors for an engineering services company, and I also serve on a statutory required governmental safety committee in the US. I am writing to you not in those official capacities but as an individual member of the public.

I have known Dr. Quinn for quite a long time. He would be an excellent contributor as a member of the DCISC for the following reasons.

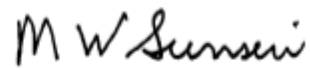
Dr. Quinn has twenty-five years of nuclear power plant experience. I have learned that highly effective safety oversight individuals all possess a common factor. They understand the business and technology that they are reviewing. Dr. Quinn's experience positions him to provide excellent oversight of an operating nuclear power facility such as Diablo Canyon.

Dr. Quinn has twenty years of consulting experience primarily in event and organization analysis. This experience enables Quinn to know how to ask the right questions at the right time in order to make the most effective use of the committee's precious time at the operating facility. The fact that Dr. Quinn also teaches analysis techniques demonstrates his proficiency with these skills. I have recently received unsolicited positive feedback from a client using Dr. Quinn's course.

Dr. Quinn has served as a board member and chairman of a local community not-for-profit board. Having served on such boards myself, I know it takes a special set of interpersonal skills to effectively communicate and work towards common goals when a very diverse group of individuals bring their ideas to the table. I expect that these skills will enable Dr. Quinn to work very effectively with the three member DCISC.

In closing, Dr. Michael D. Quinn possess the background, skills and abilities to be an effective member of the DCISC, and I highly support his nomination.

Sincerely,

A handwritten signature in black ink, appearing to read "M W Sunseri". The signature is written in a cursive, flowing style.

Matthew W. Sunseri

**To: David Zizmor, Esq.,****March 21, 2022**

I strongly recommend the appointment of Dr. Najmedin Meshkati to the Diablo Canyon Independent Safety Committee. I worked closely with Dr. Meshkati for more than 20 years on the most complex safety investigations conducted by the U.S. Chemical Safety Board, CSB. CSB is an independent federal agency modeled after the highly-regarded National Transportation Safety Board. CSB is a scientific, non-regulatory agency that conducts studies and investigations of major accidents involving hazardous materials.

Dr. Meshkati is nationally-recognized expert on human factors, safety culture, high reliability organizations and the safe operations of nuclear power plants. He has extensive experience serving on safety committees of the prestigious National Academy of Sciences. He has won numerous awards for his contributions to improving safety.

Dr. Meshkati will be an invaluable addition to the Diablo Canyon Independent Safety Committee.

Sincerely Yours,

Bill Hoyle

Manager and Senior Investigator, U.S. Chemical Safety Board, retired

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 NASA Jet Propulsion Laboratory  
 Sandia National Laboratories  
 SLAC National Accelerator Laboratory

May 20, 2022

David Zizmor, Esq.  
 Public Utilities Regulatory Analyst  
 California Public Utilities Commission – Energy Division

**Subject: Recommendation in Support of Najmedin Meshkati's Appointment to the Diablo Canyon Independent Safety Commission (DCISC)**

Dear Mr. Zizmor,

It is with great enthusiasm that I offer my full support of the appointment of Dr. Najmedin Meshkati to the Diablo Canyon Independent Safety Committee (DCISC).

California is home to many of the world's leading education and research institutions. At CCST—a nonpartisan, nonprofit organization created at the request of the State Legislature over 30 years ago—we believe California's policies are stronger with science. We work with scientists from across this broad network to provide science and technology advice to state decision makers. As such, I have experienced firsthand that Dr. Meshkati has the extensive knowledge and expertise required to serve on DCISC and will fulfill the responsibilities of his appointment with the utmost integrity and professionalism.

Dr. Meshkati is a nationally recognized expert on the safety, reliability, and efficiency of large-scale, complex systems, including nuclear power plants, with over 35 years of teaching, interdisciplinary research, and leadership in the field. He has demonstrated a continued dedication to leveraging his expertise to inform policy making decisions, serving as a member and technical advisor on two national panels convened by the National Academies of Science, Engineering Medicine, investigating major recent events: the Fukushima Nuclear disaster and the Deepwater Horizon explosion.

I and my team at CCST had the pleasure of working with Dr. Meshkati on a report commissioned by the CPUC to determine the long-term viability of underground natural gas storage in California. Dr. Meshkati served on the report's Steering Committee, a group of experts who helped guide the report authors, write conclusions and recommendations based on findings of the authors, and write an executive summary for the report. Dr. Meshkati was integral to the chapter of the report which explored the risks to health, safety, environment, and gas storage system infrastructure at California subsurface gas storage facilities. He went above and beyond his role as a Steering Committee member, authoring a section published in the report on the importance of effective and healthy safety culture, drawing from his many years of expertise on risk reduction and safety in the nuclear and oil and gas industries. The

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recommendations in that chapter of the report were actionable and impactful due to Dr. Meshkati's real world experience and scientific expertise. Dr. Meshkati was always very responsive and actively engaged with our team, which is so important to the success of this type of advisory work. He is one of the most effective and thoughtful Steering Committee members I've had the pleasure of working with.

For these reasons, I would like to eagerly endorse the appointment of Dr. Najmedin Meshkati to the Diablo Canyon Independent Safety Committee.

Warmest Regards,



**Amber Mace**  
CEO of the California Council on Science and Technology